



ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

ENGINE IDENTIFICATION: GE90-77B BYPASS RATIO: 8.6
 UNIQUE ID NUMBER: 9GE121 PRESSURE RATIO (π_{00}): 35.7
 COMBUSTOR: PEC
 ENGINE TYPE: TF RATED THRUST (F_{00}) (kN): 357.1

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO _x	SMOKE NUMBER
D _p /F ₀₀ (g/kN) or SN	6.7	56.5	70.1	2.0
AS % OF ORIGINAL LIMIT	34.1	47.9	0.6	12.0
AS % OF CAEP/2 LIMIT (NO _x)			78.7	
AS % OF CAEP/4 LIMIT (NO _x)			89.4	
AS % OF CAEP/6 LIMIT (NO _x)			99.7	
AS % OF CAEP/8 LIMIT (NO _x)			114.0	

DATA STATUS

- PRE-REGULATION
 x CERTIFICATION
 - REVISED (SEE REMARKS)

TEST ENGINE STATUS

- NEWLY MANUFACTURED ENGINES
 x DEDICATED ENGINES TO PRODUCTION STANDARD
 - OTHER (SEE REMARKS)

EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE
 (ANNEX 16 VOLUME II)

CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)
 x OUT OF PRODUCTION (DATE: -)
 - OUT OF SERVICE (DATE: -)

MEASURED DATA

MODE	POWER SETTING (%F ₀₀)	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO _x	
TAKE-OFF	100	0.7	2.992	0.04	0.32	43.15	0.9
CLIMB OUT	85	2.2	2.443	0.03	0.33	34.16	0.8
APPROACH	30	4.0	0.821	0.06	2.23	14.52	1.4
IDLE	7	26.0	0.292	3.34	34.77	5.03	1.6
LTO TOTAL FUEL (kg) or EMISSIONS (g)			1101	1548	16429	21592	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE D _p /F ₀₀ (g/kN) or AVERAGE SN (MAX)				4.3	46.0	60.5	1.6
SIGMA (D _p /F ₀₀ in g/kN, or SN)				0.3	1.1	0.7	0.8
RANGE (D _p /F ₀₀ in g/kN, or SN)				4.1-4.72	45.25-47.27	59.78-61.16	0.82-2.39

ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT All POWER SETTINGS
 STAGE BLEED 0 (% CORE FLOW) AT All POWER SETTINGS

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	98.4-98.7
TEMPERATURE (K)	277.2-281.3
ABS HUMIDITY (kg/kg)	0.0015-0.0043

FUEL

SPEC	Jet A-1
H/C	
AROM (%)	15-16

MANUFACTURER: General Electric Company
 TEST ORGANIZATION: General Electric Peebles Test Operation
 TEST LOCATION: Site 6A
 TEST DATES: 30/11/2007-08/12/2007

REMARKS

- GE Aviation Report R2007AB851
- Engine serial number 900-505/1
- Turbomachinery incorporating 2D aero
- Performance Enhanced Combustor (PEC)

Compliance with Fuel Venting requirements: x ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)